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Akins et al.

[54] **REALTIME COMMUNICATION OF HAND DRAWN IMAGES IN A MULTIPROGRAMMING WINDOW ENVIRONMENT**

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[52] U.S. Cl. **395/157; 395/153; 395/155; 395/163**
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[56] References Cited

U.S. PATENT DOCUMENTS

4,977,520 12/1990 McGaughey, III et al. ... 395/153 X
5,119,319 6/1992 Tanenbaum .... 395/153 X

[57] **ABSTRACT**

An advanced user interface operates in an integrated operating environment which supports realtime handwriting, graphical and image data. The integrated operating environment is capable of running several application programs on a standard stand-alone processor, such as a personal computer, each in its own display window. A communication window is established in a first window. Image data is imported into it from a second window. And freehand drawing data is added to the first window. The contents of the first window can then be sent to a second processor. In this manner, hand drawn images can be combined with other image data and communicated over a network.

7 Claims, 11 Drawing Sheets